

Replacement Sheet
Application No. 10/565,179

HIGH SPEED AIRSHIP

SUMMERY OF THE INVENTION

A high speed airship constructed from a commonly known "stronger-than-steel rip-stop fabrics", with multiple inflatable clusters arranged and attached into a specially designed multiple tubular inflatable structure to support each other, to eliminate all rigid supporting frame or rigid supporting structure, to have the lightest, but strongest, indestructible, inflated-structure airship body, that always bounce back to its original shape like a giant ball, and to have the highest payload by volume.

Only this special multiple tubular inflatable structure design can make it possible to enclose a space in the center, without any extra material or any internal supporting rigid frame or rigid structure, and it can be built in any size diameter space, to have the largest possible protected space in the longitudinal center of the inflated structure, where passengers or cargo can be placed, to eliminate the extra costs and weight of the rigid structure, to have the highest payload by volume, and to highly increase safety, to solve the #3 cause of airship disasters.

A same highly aerodynamic straight cone shape of front and rear end has a common knowledge rigid cone shape tip section attached to both, that follows the cone shape of the front and rear end smoothly without interruption, to enclose the protected space in the center in an accessible way, and to have better aerodynamics for high speed, and makes it possible to land at any place at any elevation on earth directly on ground, snow, or water, to increase safety, to eliminate the need for mooring pole, solving the #3 cause of airship disasters.

The all fabric longitudinal multiple inflatable sections must contains multiple full size inner tubes made to contain helium or air, one inner tube is reserved to contain helium only, an other inner tube is reserved to contain air only, and this means that any of the sections can be inflated with air and helium in the same time, without mixing the helium with air, to keep all the sections inflated continuously to the operating pressure at the operating altitude, to maintain the rigidity of the airship body all the time, only this design can make it possible to change the helium / air ratio from 0 -100% in all or any of the sections independently to eliminate pressure height, and the use of ballast, solving the #3 cause of airship disasters.

A large number of common knowledge propulsion units attached to both sides of the airship each can be independently rotated into any position of a 360 degree circle. The propeller thrust assures absolute and rapid control of: speed, direction, altitude, balance, buoyancy, in emergency, and the needed control at landing and take off, to eliminate the need for ground crew also, solving the #1 and #2 causes of airship disasters.

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BRIEF DESCRIPTION OF THE PREFERRED EMBODYMENT

Referring to FIG. 1, the airship according to this invention comprises:

All fabrics inflated-structure airship body 10, adapted to contain helium or air.

Passenger or cargo space 18, in the center of the inflated structure airship body 10.

Common knowledge cone shape rigid tip 14, is attached to the front end of the inflated structure airship body 10,

Common knowledge cone shape rigid tip 15, is attached to the aft end of the inflated structure airship body 10,

In the preferred embodiment, the airship has six common knowledge propulsion unit 22, three propulsion units on each side of the airship body 10, each propulsion unit contains engine, propeller and is attached to the envelop with a pivoting shaft, so each of the propellers plane of rotation can be independently rotated into any direction of the 360 degree circle.

Referring to FIG. 2, and FIG. 3, inflated-structure airship body 10, has:

Multiple longitudinal dividers 13, are perpendicular to the longitudinal center line of the airship.

Multiple tubular dividers 11, and 12, which centerline same as the airship longitudinal center line, but having different radius.

Multiple cross dividers 17, to divide the longitudinal clusters to multiple sections, each and every section must contains multiple common knowledge collapsible inner tubes, made of fabrics supported aluminized plastic film, an inner tube 19, is reserved for helium only, have inflating port, valve, piping to the helium pump and to the helium containers 16, and an inner tube 20, is reserved for air only, have inflating port, valve, piping to the air pump. Each inner tube can be inflated with helium and air in the same time, without mixing the helium with air, and keep it inflated continuously to the operating pressure at the operating altitude, the helium/air ratio can be controlled selectively from 0 to 100% under continuous pressure and therefore eliminate pressure height, control balance and buoyancy while keeps the airship body at the operating rigidity all the time.